

NOTES ON SCALE-INSECTS (COCCIDAE).—PART I.

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During the past few months a large amount of Coccid material has been submitted to me for identification through the Imperial Bureau of Entomology. A large proportion of the species came from Uganda where they were collected by the Government Entomologist, Mr. C. C. Gowdey; smaller collections were also received from other parts of Africa, including Zanzibar; and from Barbados from Mr. John R. Bovell, Superintendent of Agriculture. Nearly all of the new species which have so far come to hand are described in this paper; and records and descriptions of other species are also given where it has been thought desirable to do so.

Monophlebus raddoni, Westwood.UGANDA: near Kakindu, Basonga, 23. viii. 11 (*S. A. Neave*).

There were two males from the above-named locality, which agree in all the essential details given by Westwood.* These examples were accompanied by another male Coccid of the same genus, but this is larger, has a brighter costal stripe, and there are also slight differences in the caudal tubercles or "tassels." Possibly this specimen represents a distinct species, but in the absence of females I feel that it would be unwise to erect a new name for it. The example bears the same data as those of *Monophlebus raddoni*, Westw.

Icerya longisetosa, Newstead.*Icerya longisetosa*, Newst., Sond. Mitteil. Zool. Mus. Berlin, v, pt. 2, p. 154, fig. 1 a-c (1911).

This Coccid was described from material collected by Professor Vosseler at Amani, German East Africa, in the year 1903, but the waxen covering of the adult female was so badly damaged through being preserved in alcohol that it was impossible to give a description of its formation. Dr. Simpson's specimens are, however, in a much better state of preservation, though not so perfect as one could wish them to be for descriptive purposes. I append below a description of the waxen covering and the ovisac of an old adult female.

Length, 10–14 mm.; *width*, 9–10 mm.

Dorsum thickly covered with short and more or less rounded plates which have so completely coalesced as to render their true form doubtful; submarginal plates curved and narrowed distally, they average about half the length of marginal ones; the latter very stout, narrowing distally and reaching in some cases a little beyond the ovisac, in others they terminate at or near its distal margin; cephalic plates enormously thick, recurved and sometimes also slightly contorted. Ovisac complete and similar in texture and colour to the secretory covering and plates of the dorsum.

* *Arcana Entom.*, i, p. 21, pl. vi, fig. 3 (1841).

SIERRA LEONE: Daru, 18. viii. 12 (*Dr. J. J. Simpson*).

The ovisacs contained numerous dead larvae which agree in every detail with typical examples from Amani; the enormous length of the antennae and caudal hairs being strikingly characteristic.

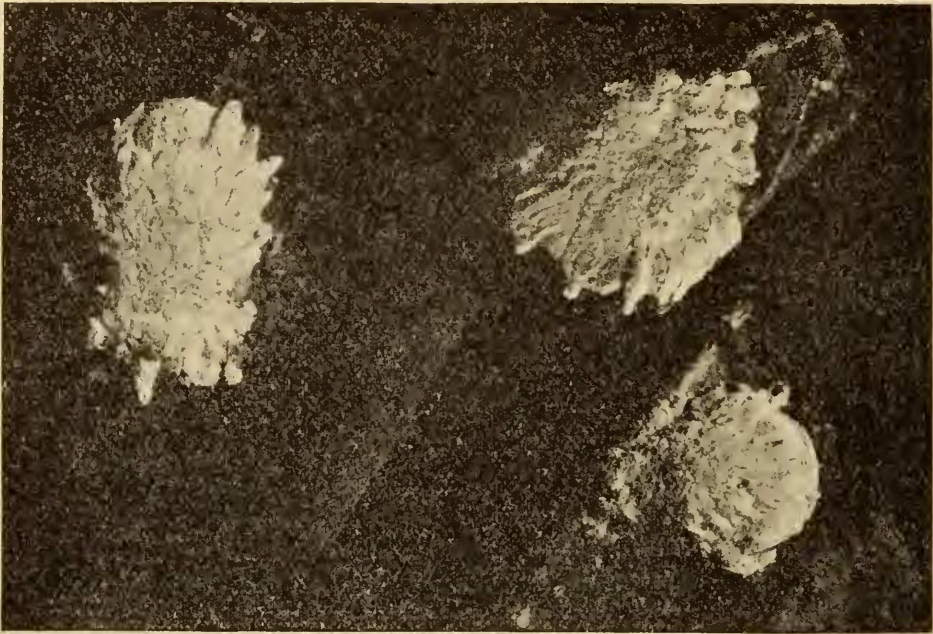


Fig. 1.—*Icerya longisetosa*, Newst.

Icerya purchasi, Maskell.

ZANZIBAR (*Dr. W. M. Aders*).

Found on orange and other species of Citrus. This is a new locality for this destructive pest, which is generally known as the “fluted scale.”

Dactylopius (Pseudococcus) obtusus, Newstead.

Dactylopius (Pseudococcus) obtusus, Newst., Sond. Mitteil. Zool. Mus. Berlin, v, pt. 2, p. 164 (1911).

Female, adult (figs. 2 and 3).—Dorsum completely covered with a creamy white and rather closely felted secretion, with some indication of being divided into regular plates; margin with a series of creamy white or pale buff appendages, relatively short at the sides, but lengthening as they approach the posterior margin, where they are of great length, distinctly curved or twisted, and very stout; all the appendages rest more or less upon the ovisac. Ovisac complete, rather closely felted, and firmly attached to the insect. Colour creamy white or buff white, very highly convex, widened posteriorly, narrowed somewhat anteriorly; both longitudinally and transversely striated or faintly fluted, the longitudinal striae being much more distinct and also more widely separated than the transverse ones which are decidedly faint. The size of the ovisac and secretory covering combined as compared with that of the female is extraordinary.

In my original description of this insect I was unable to give any information regarding the external covering of the female, as all the cereous matter had been

dissolved by the alcohol in which they were preserved. I now find that the covering and ovisac together give the insect a very striking resemblance to a species of *Icerya*, so much so that it might easily pass as such without an examination of the structural characters. Maskell* describes a similar insect (*Dactylopius iceryoides*), but this species is in many ways quite distinct from *D. obtusus*.

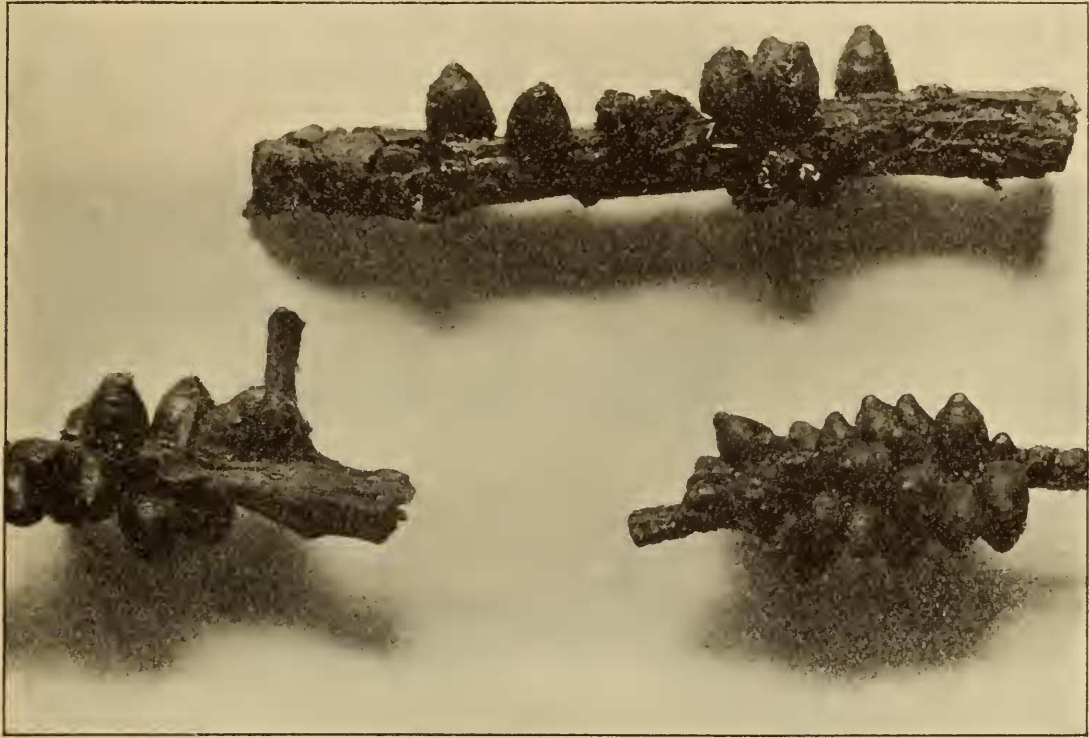


Fig. 2.—*Dactylopius obtusus*, Newst.

GERMAN EAST AFRICA: Dar-es-Salaam and Tanga, vi. 1911 (*Prof. R. Newstead*); ZANZIBAR: Kiungani, 1912 (*Dr. W. M. Aders*).

Dr. Aders' examples were found on the leaves and fruit pedicels of the mango. The pedicels submitted were completely covered on one side with the Coccids.

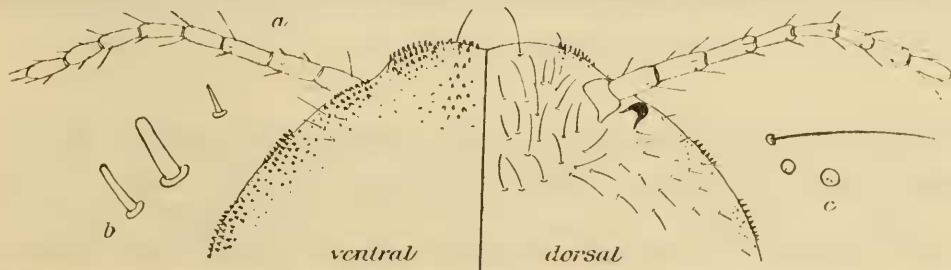


Fig. 3.—*Dactylopius obtusus*, Newst., cephalic portion of adult female: a, antenna; b, spines; c, spinnerets and hair.

When passing through Dar-es-Salaam and Tanga, in June 1911, I found this insect swarming on two unidentified shrubs, which were under cultivation in both

* Trans. New Zealand Inst. xxv, p. 33 (separata), pl. vii, figs. 1-5 1891).

the above-named places. It is evident therefore that this species has a wide distribution on the East Coast of Africa; and judging by its enormous numbers it must cause serious injury to the plants which it infests.

***Stictococcus gowdeyi*, sp. n.**

Female, adult (fig. 4).—Hemispherical, with a deep subcentral transverse depression in front of the anal orifice.* Integument smooth and so brilliantly polished as to appear almost glass-like. Colour rich dark castaneous to piceous. Margin with a narrow fringe of closely set, pale orange-yellow spines; and there is a narrow vertical band of white secretion over the anterior stigmatic clefts.

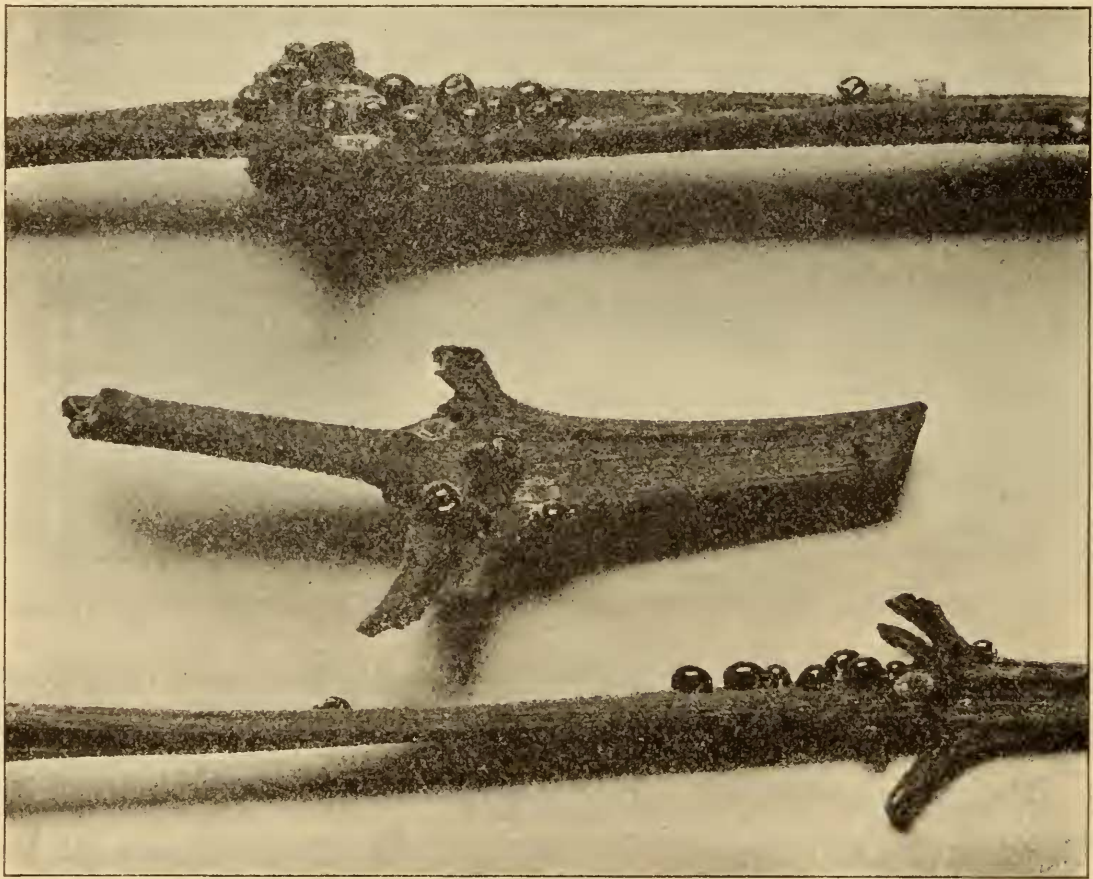


Fig. 4.—*Stictococcus gowdeyi*, Newst.

Ventral surface of fringe covered with white secretion. Antennae short, and of five segments; distal segments with several stiff spinose hairs. Legs well developed; tarsus decidedly shorter than the tibia; upper digitules long, normal; lower digitules so broadly dilated as to appear almost fan-shaped. Anal orifice normal; but surrounded by an unusual number of long hairs. Margin of body with a thickly set fringe of long stiff spines, arranged 3-4 deep, and placed at intervals between them and also slightly above them are some very long slender hairs. *Greatest diameter*, 1.6-2.2 mm.

* This organ is placed "in the middle of the back" (Cockerell) in this genus. R. N.

Larva of female.—Ellipsoidal; anal orifice in the middle of the dorsum, as in the adult female; upper plate with four immensely long, stiff hairs, and the inner edge fringed with minute hairs; lower plate with (?) two long stiff hairs; chitinous ring surrounding the plates, ovoid. Dorsum with four longitudinal rows of long, curved, and laterally serrated spines (fig. 5*a*); marginal spines (fig. 5*b*) similar, but much longer, and almost straight, with the tips more or less pointed; alternating between the long serrated spines are some short ones with slightly dilated and obtusely rounded tips. Immediately in front of each antenna is an immensely long, stiff hair, and there are two hairs at the end of the body which are of greater length. Antennae of six subequal segments, terminal

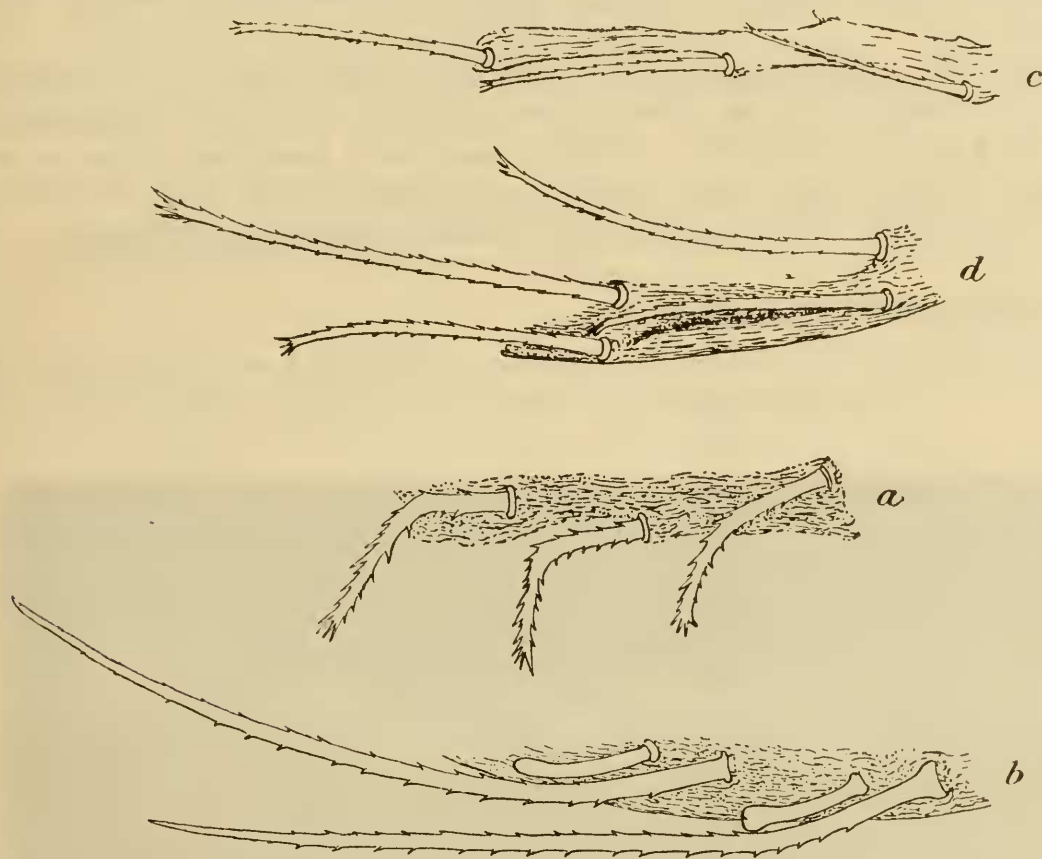


Fig. 5.—*Stictococcus gowdeyi*, Newstead; *a*, dorsal spines of the larva of the female; *b*, marginal spines of the same; *c*, dorsal spines of the larva of the male; *d*, marginal spines of the same. All the figures are drawn to the same magnification.

segment with numerous spinose hairs. Mentum large, bimerous; rostral filaments very long. Legs with a very long stiff bristle-like digit to the tarsus; digitule of the claw as in the female.

Larva of male.—Much more elongated than the larva of the female. Dorsum with four equidistant rows of relatively slender, serrated and almost straight spines (fig. 5*c*); marginal spines (fig. 5*d*) similar, but longer and arranged in pairs; all the spines both marginal and dorsal are much more widely separated than are the corresponding spines in the larva of the other sex. *Buccal organs obsolete*. Anal orifice in the normal position at the distal end of the body. Legs similar to those of the larva of the female. Number of segments in the antennae doubtful.

UGANDA : Entebbe, 10. viii. 11 (*C. C. Gowdey*).

The females were so numerous in some instances as to cover almost completely the stems of the food-plant (*Haranga madagascariensis*), looking somewhat like small glass beads accidentally fastened to the branches. It is a very remarkable and highly interesting species, easily distinguished by its hemispherical form, the glass-like texture of the integument and the fringe of immense spines at the margin of the body.

Recently I have discovered that the larvae of *Stictococcus sjoestedti*, Ckll., are dimorphic : so that, including the larvae of *S. dimorphus*, Newst., and those of the insect herein described, there are now three known species of *Stictococcus* having dimorphic larvae, a character which is of the highest interest for the zoologist.

I have the greatest pleasure in dedicating this insect to its discoverer, Mr. C. C. Gowdey, who has done so much towards extending our knowledge of the Coccid fauna of Uganda. In this connection I would urge him to search diligently for the males whose puparia may possibly occur upon the leaves or some other portion of the food-plant some distance away from the females.

Ceroplastes coniformis, sp. n.

Female, test (fig. 6).—Thin and distinctly cone-shaped, with the apex bluntly pointed ; not divided into plates, but with a more or less distinct, minute, ovate

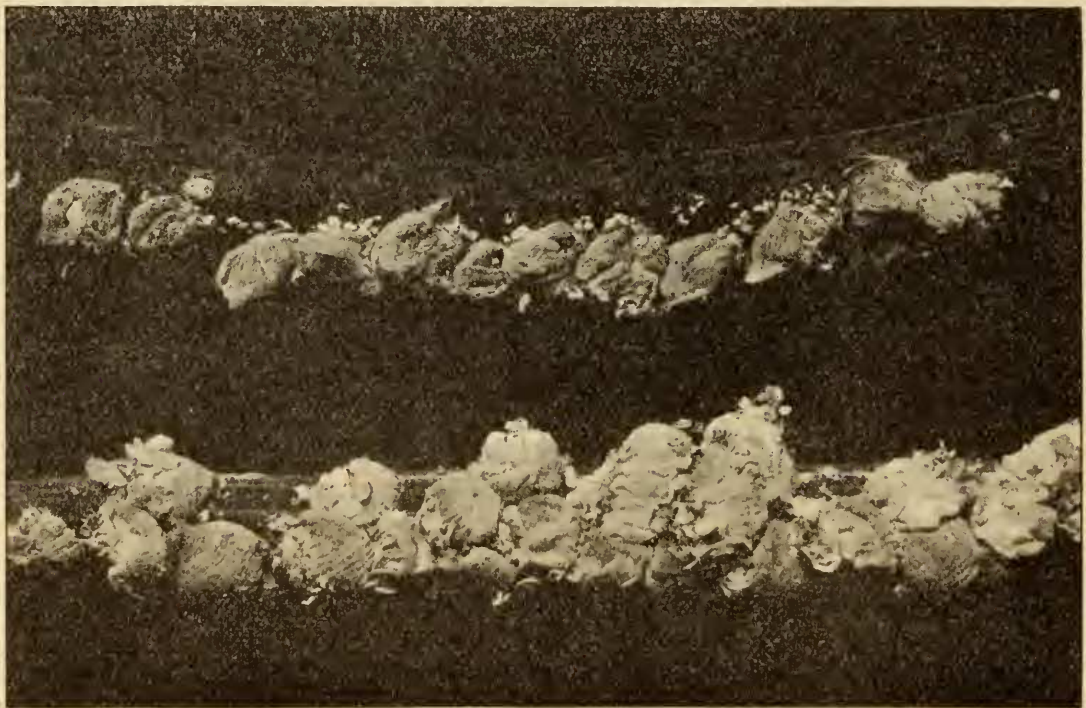


Fig. 6.—*Ceroplastes coniformis*, Newst.

patch of secretion at the apex of the test, and in the more perfect individuals some small white patches of secretion over the stigmatic clefts. Colour translucent yellowish-brown, sometimes with indefinite darker markings due evidently to foreign matter. *Height*, 3·9–4·7 mm. ; *greatest diameter at base*, 2·8–4 mm.

Female, adult.—Form similar to that of the test, but slightly less bluntly pointed dorsally. Integument strongly chitinised, pale yellowish-brown, margins and a small area surrounding the anus dark red-brown. Cephalic area constricted and forming a slight projection in front. Stigmatic clefts small, but very clearly defined and studded with small conical spines; *externally* the spines occupy a relatively small area, and vary slightly in size. Derm with rather large, ovate and translucent pores at the margin, being especially numerous on the cephalic projection; those of the dorsum minute and very widely separated. Caudal process rudimentary and varying from dark castaneous to black or piceous; anal lobes small and widely rounded distally. Antennae (fig. 7*a*) of six segments, the third being equal to or a little longer than the three succeeding segments together; fourth, fifth and sixth each with a stout spinose hair. Legs (fig. 7*b*) with the tarsi as long as the tibiae, the latter distinctly produced ventrally; digitules normal.

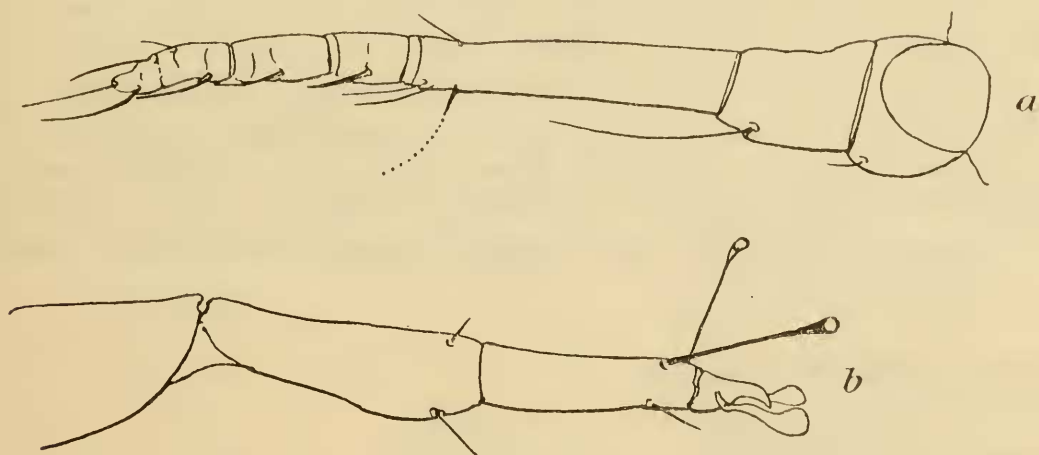


Fig. 7.—*Ceroplastes coniformis*, Newstead; *a*, antenna of adult female; *b*, leg of same.

Measurements very slightly less than those of the thin waxen covering or test.

Female, second stage.—Subcircular in outline; margin with bright yellow, tubercular appendages formed of secretory matter similar to those in the male puparia; dorsum pale brown (in dead example), with patches of yellow secretion arranged more or less in regular sequence and distinctly separated. The position of the stigmatic clefts is indicated by a single long stout seta-like process which projects considerably beyond the margin.

Male puparium.—Rather narrowly elongate, extremities equally rounded; margin with a series of well-marked tubercular projections, each tubercle furnished at the tip with a few stiff spine-like processes; dorsum not divided into plates, but covered with flake-like patches of secretion. Colour bright pale yellow; texture glass-like.

UGANDA: Entebbe, 16. xi. 12 (C. C. Gowdey).

Taken on *Ficus* sp. in the Botanic Gardens.

This is a markedly distinct species of *Ceroplastes*, easily recognised by the unique cone-like form of the female and its test or waxen covering.

Ceroplastes africanus, Green.

NORTHERN NIGERIA : Kogin Sirikin Pawa, xi. 1910 (*J. J. Simpson*).

In none of the four examples before me is there any sign of the nipple-like prominence noted by Green,* neither is there any trace of lateral waxen plates. In its external characters therefore, it agrees best with *Ceroplastes egbarum*, Cockerell;† but this species has, according to its author, “no lateral humps,” whereas the examples taken by Dr. J. J. Simpson have well-marked thoracic and sub-anal humps or tubercles; clearly therefore they cannot be referable to *C. egbarum*; and although Green makes no reference to the presence of these organs in *C. africanus*, yet he figures them (*loc. cit.* fig. 1*b*) as being present in the young adult female. Unfortunately I was unable to dissect out the antennae, so that I cannot say if these organs agree with those of typical *C. africanus*. All that I can add regarding these structures is that the first to the fourth segments agree with the corresponding segments noted and figured by Green (*loc. cit.* fig. 1*f*). One other discrepancy that I have noted in Simpson’s specimens is that the stigmatic spines at the extreme margin are simple, stout and rather long, not “small conical ones” as noted by Green; but inside these longer spines are innumerable minute conical ones occupying a large area which in form and extent is almost identical with the stigmatic area in *C. ugandae*, Newst.‡

Possibly the Nigerian examples may prove eventually to be a well-marked race of *C. africanus*, but much more material is needed before one can definitely decide upon this question.

Ceroplastes ugandae, Newstead.

UGANDA : Entebbe, 12. viii. 11 (*C. C. Gowdey*).

Found on *Anona muricata*.

The organs described and figured by me in this Bulletin (vol. ii, p. 94, fig. 8*c*) as “parastigmatic glands” are undoubtedly clear spaces in the dense chitin to which extremely minute spines are attached. I should point out also that this Coccid presents several characters in common with *Ceroplastes fulleri*, Ckll.,§ but in the description of the latter Cockerell makes no reference as to the presence of tubercles on either side of the caudal process or to those which occur over the stigmatic clefts; neither does he mention the papillae which render the integument so strikingly characteristic in *C. ugandae*.

Lecanium (Eulecanium) filamentosum, sp. n.

Female (? *adult*), dried examples.—Orange brown, integument shining. Form oblong-oval, narrowed anteriorly and with one side generally more distinctly curved than the other; median area slightly raised, marginal zone very broadly flattened and translucent; *margin with a distinct fringe* of rather widely separated, short, glass-like filaments, all of which are attached to the tips of the truncated

* Ann. Mag. Nat. Hist., (7) iv, p. 188, figs. 1–1*f* (1899).

† Entomologist, xxxii, p. 127 (1899).

‡ Bull. Ent. Research, ii, p. 94, fig. 8*c* (1911).

§ Entomologist, xxxv, p. 113 (1902).

marginal spines. Dorsum rather strongly wrinkled, and with a well formed ridge over the stigmatic areas. Integument rather closely studded with tubular glands or spinnerets (fig. 8*a*), the orifices of which are circular or cup-shaped; besides these there are numerous well defined compound groups of spinnerets (fig. 8*b*), but in these the subcutaneous tubes are very short and suddenly attenuated, so that the whole structure appears like a truncated pear in miniature. Marginal spines (fig. 8*c*) stout, suddenly truncated, the truncated ends being in many instances divided so that they present either a deep cleft or a more or less

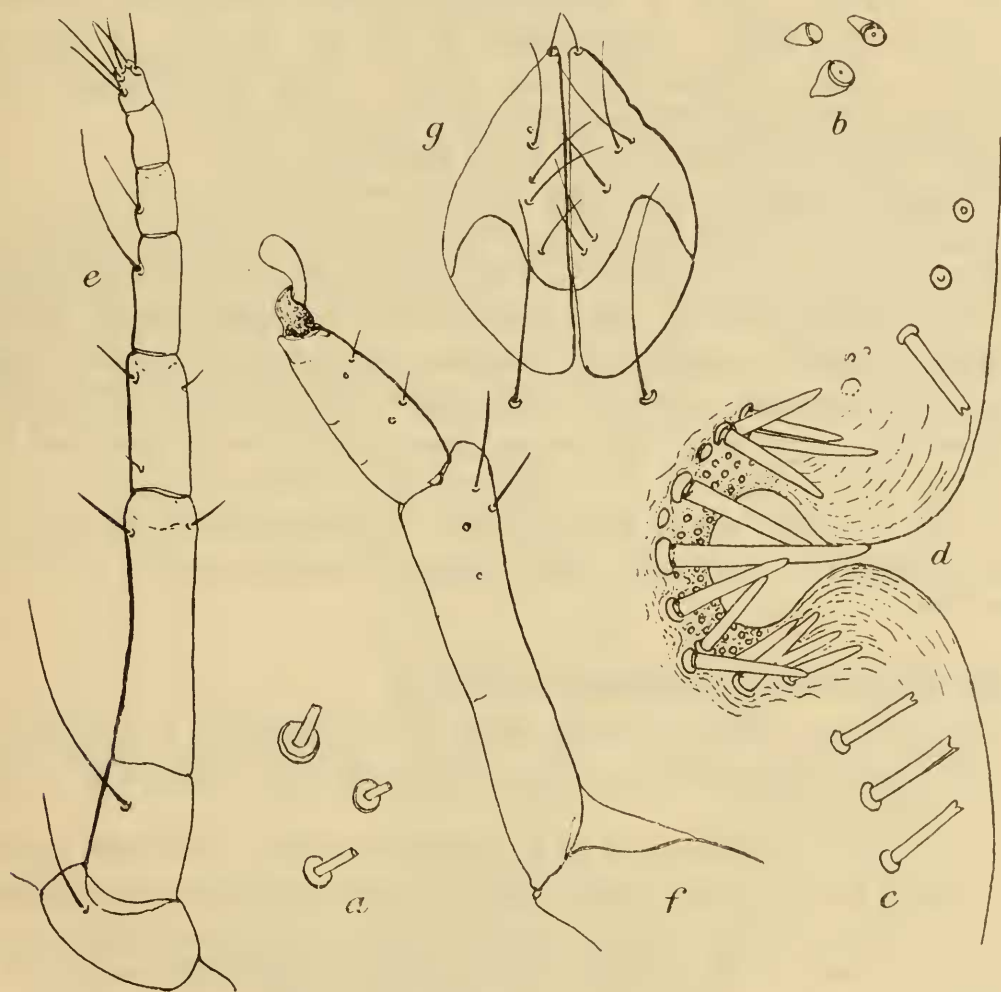


Fig. 8.—*Lecanium filamentosum*, Newstead, female; *a*, dorsal glands; *b*, compound spinnerets; *c*, marginal spines; *d*, stigmatic cleft; *e*, antenna; *f*, tibia and tarsus; *g*, anal lobe.

jagged appearance. Stigmatic clefts (fig. 8*d*) strongly evaginated and thickly set with a series of stout spines varying in number from 9–13; between these and the extreme margin is a group of circular spinnerets. Antennae (fig. 8*e*) of eight segments, of which the third is much the longest, being almost equal in length to the last four segments together; the fifth is also unusually long. Legs stout; tarsi (fig. 8*f*) very short; lower digitules broad and spathuliform; claws very short. Anal lobes (fig. 8*g*) with four or five long hairs ventrally and two or three distally. Length, 4–6.2 mm. (older examples may be much larger).

Puparium of the male.—Glassy opaque white; the three bilateral transverse ridges and also the anal cleft strongly pronounced; *dorsum with a very deep median transverse cleft*, arising from which, on the posterior surface, is a relatively large rectangular process of yellowish or creamy-white secretion; the median oblong cell or "coronet" on either side of the central cleft closely packed with vesicular processes which, being darker in colour than the surrounding secretory matter, stand out in marked contrast to the rest. *Length*, 2.7 mm.

Male (dried example) with one pair of white caudal appendages. Abdomen, legs and antennae pale brown; thoracic apodemes piceous; wings with the costa dull crimson. When placed in cold potash the body changes to bright pale crimson, so that it is highly probable that in life the insect is of this colour. Ocelli eight in number, of which four are ventral. Legs and antennae normal. *Length*, inclusive of the anal filaments, 3 mm.; wing, 1.7 mm.

UGANDA: Tero Forest, 13. vii. 12 (*C. C. Gowdey*).

"On an unknown shrub in the depth of forest."

All the females are apparently young adults and it is highly probable that when older examples are discovered they will be found to be much larger; but it is very improbable that they will differ in structural details from the young adults. Like the female of *Lecanium (Eulecanium) ciliatum*, Douglas, this insect also possesses a fringe of fine glassy filaments; but it is markedly distinct from this or any allied species and may, apart from the marginal fringe, be determined by the form of the marginal spines, the antennae and the well defined groups of spinnerets on the dorsum. The puparium of the male is also strikingly characteristic and quite unlike that of any other species with which I am acquainted.

Lecanium (Eulecanium) somereni, Newstead.

Lecanium mori var. *somereni*, Newst., Bull. Ent. Research, i, p. 187 (1910).

Lecanium (Eulecanium) tremae, Newst., Sond. Mitteil. Zool. Mus. Berlin, v, pt. 2, p. 162, fig. 5 (1911).

Having examined a fresh series of preparations of the *Lecanium* to which I gave the specific name *tremae*, I have come to the conclusion that this insect is synonymous with *L. somereni*, Newst. Furthermore there can, I think, be little doubt that *L. somereni* is distinct from *L. mori*, Signoret, and must take specific rank.

Lecanium (Saissetia) oleae (Bernard).

UGANDA: Entebbe, 26. viii. 11 (*C. C. Gowdey*).

Found on the hard wood of an unnamed tree.

All the examples are abnormally swollen by the attacks of Chalcidid parasites.

Lecanium (Saissetia) nigrum, Nietner.

UGANDA: Entebbe, 15. viii. 11 (*C. C. Gowdey*).

The leaves of the food-plant (*Anona muricata*) were very heavily infested with females in all stages of development.

Pulvinaria sp. n.

UGANDA: Entebbe, 26. vii. 11. (*C. C. Gowdey*).

Among the many species of COCCIDAE collected by Mr. Gowdey in Uganda is an enormous specimen of a female *Pulvinaria*, measuring, in its dried and shrivelled condition, half an inch in length. This insect had secreted part of its ovisac during transit so that there can be no doubt as to its generic position. Without this evidence one might reasonably have placed it in the genus *Lecanium* and have recorded it provisionally as a young form of *L. sallei*, Sign. The *Pulvinaria* is undoubtedly an undescribed species, but it is inadvisable to describe it until more material comes to hand.

Aspidiotus gowdeyi, sp. n.

Puparium of female.—Very small, obconical and suddenly truncate at the margin of the larval pellicle; margin circular. Colour dark brown, outer margin paler, upper margin orange-brown to pale castaneous. Larval pellicle completely hidden beneath a glistening white secretion, which is perfectly flat, quite circular in outline, and not raised above the upper truncate margin of the secretory covering of the puparium. Ventral pellicle thin. *Diameter*, 0.4–0.5 mm.

Female, adult.—Broadly ovate, narrowed posteriorly; integument very thin and transparent; presence of rudimentary antennae and parastigmatic glands

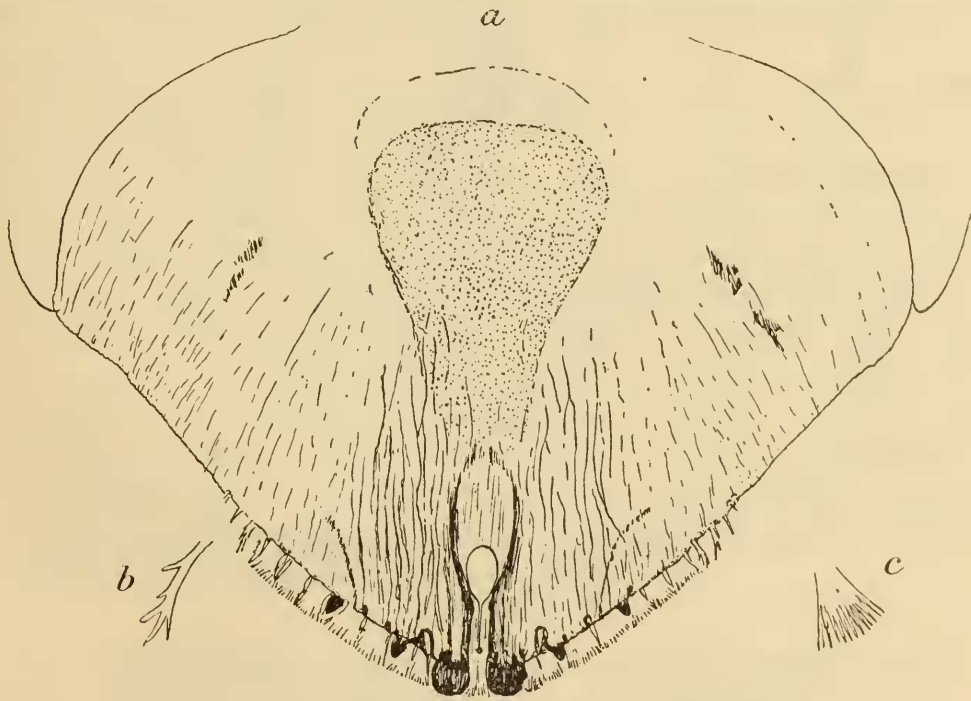


Fig. 9.—*Aspidiotus gowdeyi*, Newstead; *a*, pygidium; *b* and *c*, squamae.

doubtful. Pygidium (fig. 9*a*) with six lobes; median lobes much the largest, distal margin broadly rounded; second and third pair small and somewhat triangular, with the distal margins more or less pointed. Squamae very finely and closely fringed; those between the median and third pair of lobes and the three succeeding ones, on either side, unusually broad (fig. 9*c*), the two proximal ones (fig. 9*b*) small and branched. Only two spines are traceable and these are placed

on opposite sides beyond the squamae. There is a very small bilateral incision near the second pair of lobes and a rather long thickening of the integument near each of the third lobes. Anal orifice large and submarginal. Position of the vaginal orifice rendered obscure by a large and somewhat tongue-shaped thickening of the integument occupying the middle area of the pygidium. Circumgenital glands absent.

UGANDA: Entebbe, 13. viii. 11 (*C. C. Gowdey*).

Found on *Anona muricata*.

This small species of *Aspidiotus* possesses three well-marked characteristics; the curiously truncated puparium of the female, with its flat white central spot, formed by the larval secretion; the broad and finely fringed squamae; and the large tongue-shaped chitinous patch in the centre of the pygidium.

Gymnaspis africana, sp. n.

Puparium of adult female.—Nude, with the exception of a small central area which is covered with the larval pellicle; ventral pellicle very thin, circular in

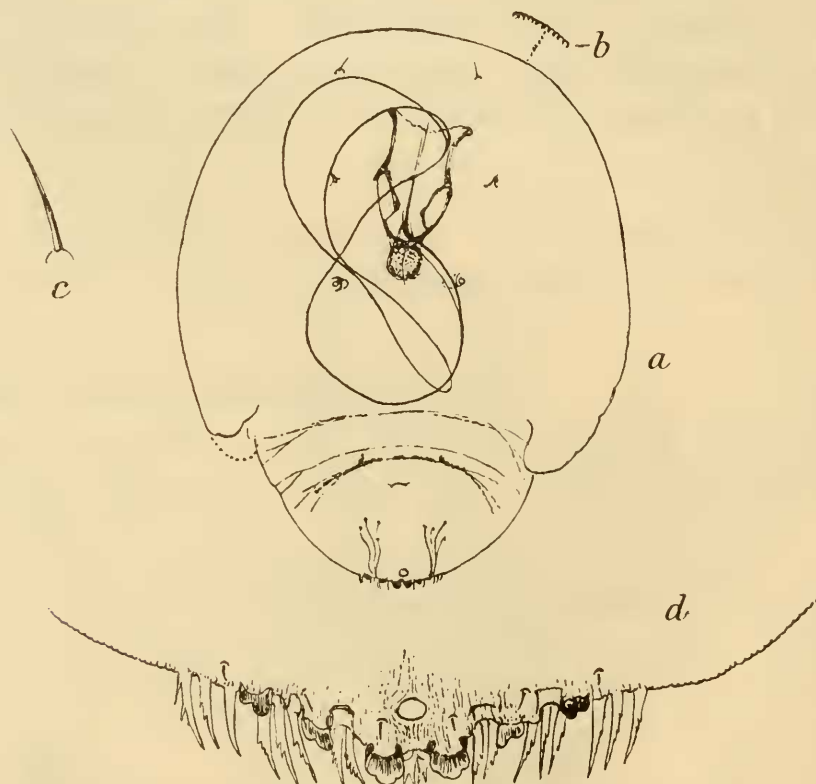


Fig. 10.—*Gymnaspis africana*, Newstead; *a*, adult female; *b*, crenulated margin; *c*, rudimentary antenna; *d*, fringe of pygidium.

outline, about one-fourth the diameter of the puparium and occupying a central position. In form it is highly convex and attenuated posteriorly. *Length*, 0.9–1 mm.

Female, adult (fig. 10*a*).—Broadly ovate, the (?) first abdominal segment forming a distinct lobe-like extension. Pygidium broadly rounded; margin of pygidium (fig. 10*d*) with three pairs of lobes; median pair more or less trilobed,

second pair with a deep lateral notch, third pair similar but smaller and with the projecting lobe more or less angular. Squames narrow and divided laterally, but scarcely fimbriated, one or two of the proximal ones being spiniform. Rudimentary antennae furnished with a single and unusually long hair (fig. 10c). Parastigmatic glands absent. Rostral filaments of great length in the young adult, being, approximately, twice the length of the body. Sexual orifice proximal. Anal orifice sub-marginal.

UGANDA: Tero Forest, 13. vii. 12 (*C. C. Gowdey*).

“On an unknown shrub in depth of forest,” in association with *Lecanium* (*Eulecanium*) *filamentosum*, Newst. The puparia (“scales”) were either attached to the edges of the leaves or near the edge of an artificial perforation.

The puparium of this Coccid is distinguishable by its dull crimson colour; the female by the lobe-like extension of the abdominal segment and the great length of the hair on the rudimentary antennae.

Described from two adult females and five puparia.

Chionaspis unilateralis, sp. n.

Puparium of adult female.—White and translucent; very long and narrow, sides parallel but not perceptibly flattened. Larval pellicle pale yellow; margin without spines; second pellicle ochraceous or faintly darker than the rest of the puparium. Ventral scale represented by a narrow strip attached to the margins of the puparium. *Length*, 2.4–2.75 mm.

Male puparium.—White, distinctly tricarinate; larval pellicle yellow, often with a patch of dark colour centrally.

Female, young adult (fig. 11a).—Elongate, with four of the abdominal segments, on the left side of the body only (fig. 11b), very distinctly tuberculate; of these the second, third and fourth each bear a single huge spine-like squama; in addition to the latter the lobes are also provided with tubular glands, the third tubercle having a well-marked transverse series of seven or eight (fig. 11c) on the dorsal surface. Pygidium (fig. 11d) with three pair of lobes, the median pair being partly recessed and the free edge finely serrated; second pair of lobes simple and projecting beyond the first; third pair narrowly separated from the second. Marginal, cylindrical spinnerets large; there are usually eight on either side of the median lobes. Circumgenital glands in five groups; the formula of five examples is given below:—

1	2	0	2	2
6—6	5—5	5—5	5—6	6—6
8—8	7—8	7—8	5—7	8—8

Rudimentary antennae (fig. 11c) each with a very long curved spinose hair. Parastigmatic glands absent; but there is a series of short tubular spinnerets extending from the lower right stigmata, these organs being entirely absent from the stigmata on the opposite side.

Female, old adult.—Much more elongate than the preceding and with normally short rostral filaments. In all the other morphological details it does not differ from the young adult.

BARBADOS: Merton Lodge, 22, i. 13 (*H. B. Bannister*).

On leaves of a palm (*Thrimax* ?); forwarded by Mr. John R. Bovell, Superintendent of Agriculture.

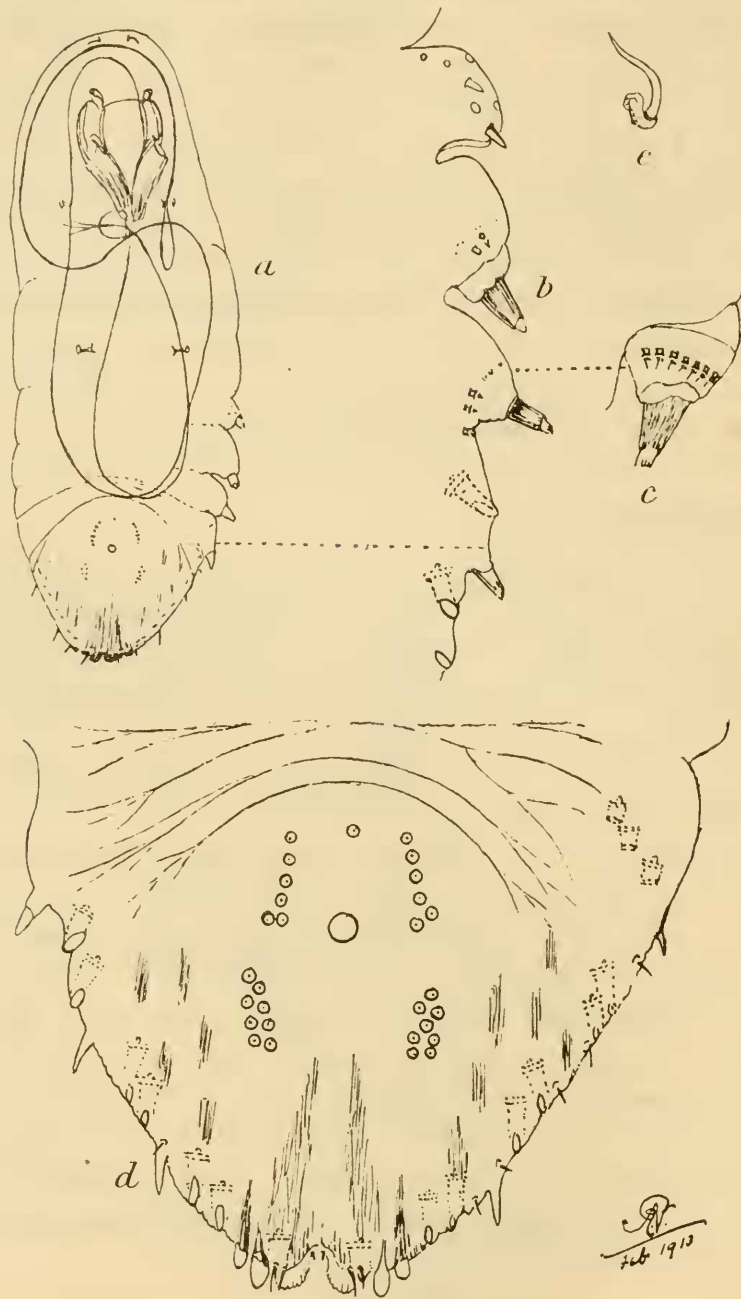


Fig. 11.—*Chionaspis unilateralis*, Newstead; *a*, young adult female after maceration in potash; *b*, left marginal tubercles; *c*, one of the tubercles enlarged showing spinnerets, &c.; *d*, pygidium; *e*, rudimentary antenna.

Though the puparium of the female is very strikingly like that of *Chionaspis elongata*, Green,* the female of *C. unilateralis* is clearly distinct and easily recognisable by the extraordinary asymmetrical arrangement of the large squama-bearing lobes on the abdominal segments.

* *Coccidae of Ceylon*, p. 125, pl. xxxix, figs. 1-14 (1899).

Leucaspis riccae, Targioni-Tozzetti.

EGYPT: Cairo, 26. xii. 12 (*Lewis H. Gough*).

The specimens are from cultivated olive, which seems to be the principal food-plant of this insect. It is certainly an injurious species, and has been recorded from France, Italy, Greece and Cyprus, but not hitherto from Egypt.

Mytilaspis (Lepidosaphes) beckii (Newman).

ZANZIBAR, 27. x. 12 (*Dr. W. M. Aders*), on orange.

This pest of the orange is known better under its old name *Mytilaspis citricola*, Packard.